Yukon
Health and Social Services

Yukon Influenza Surveillance Report
Influenza Season: 2009-2010
Summary Report
FluWatch Week 50 (Dec 13- Dec 19, 2009)

All data are provisional and subject to change as information is received.

Prepared by: Yukon Communicable Disease Control
Report Written: Dec 24, 2009
Disseminated: Dec 24, 2009

Report Highlights

This surveillance report produced by YCDC summarizes influenza activity in the Yukon for the 2009-2010 season, including FluWatch Week 50 (Dec 13 - Dec 19, 2009). Please note that FluWatch reports are produced one week behind the current date.

2009-2010 FluWatch Weeks Calendar: http://www.phac-aspc.gc.ca/fluwatch/09-10/09-10cal-eng.php

Surveillance indicators suggest that influenza activity due to pandemic H1N1 in Yukon is similar to the previous week and levels are approaching the expected range for this time of year. Included in this report is the proportion of the population that has received pH1N1 vaccination since the campaign began October 26, 2009.

Pandemic H1N1 (pH1N1) Severe Outcomes

Hospitalizations
There have been no hospitalizations since week 46 (Nov 15 - Nov 21, 2009). Since October 20th, there have been 14 pH1N1 Yukon cases admitted to hospital. Among hospitalized cases 12 of the 14 had at least one risk factor for influenza complications. 3 out of 14 hospitalized cases have been admitted to ICU.

Deaths
December 9th, Yukon's Chief Medical Officer of Health announced a third death in the territory where pH1N1 was detected. The death occurred in an infant who died early November, however, pH1N1 infection is thought to be coincidental and not a contributing factor in the death. A complete coroner's investigation is pending. Link to Yukon Health and Social Services Release: http://www.hss.gov.yk.ca/news/id_213/
Yukon has had two previous deaths: The first death occurred during week 44, in a female child with underlying health conditions. The second death occurred during week 46 in an adult female, underlying health conditions were not present.

FluWatch Reporting

Based on FluWatch activity level definitions, Yukon has reported the following activity levels:

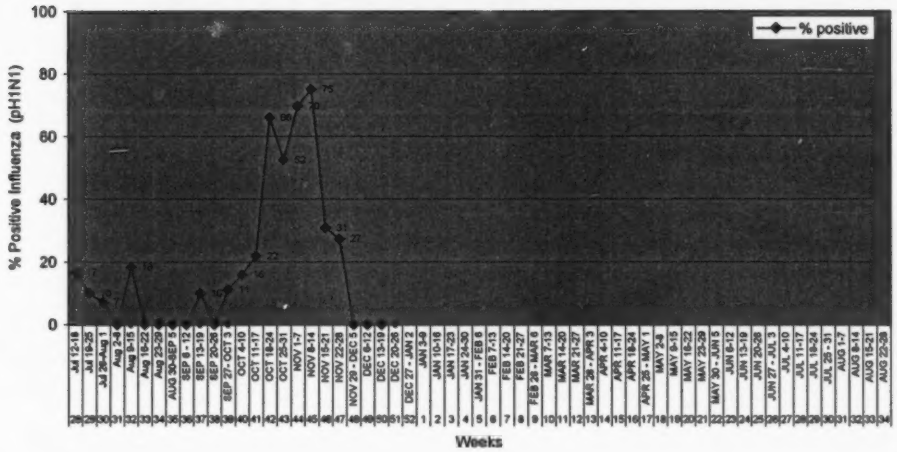
FluWatch activity level definition http://www.phac-aspc.gc.ca/fluwatch/09-10/def09-10-eng.php

Week 50	Sporadic: Sporadically occurring ILI and lab confirmed influenza together with no outbreaks detected within the surveillance region.

Laboratory Reports

Percentage of respiratory specimens testing positive for influenza A was highest during week 45, when percent positivity was 75%. Since week 45, percent positivity has continued to decline. Since week 48 none of the submitted specimens have tested positive for influenza. *Please note data collection is ongoing.*

Percentage of Respiratory Specimens (Submitted for testing in Yukon) Diagnosed Positive for Influenza pH1N1 during weeks 28 - 50



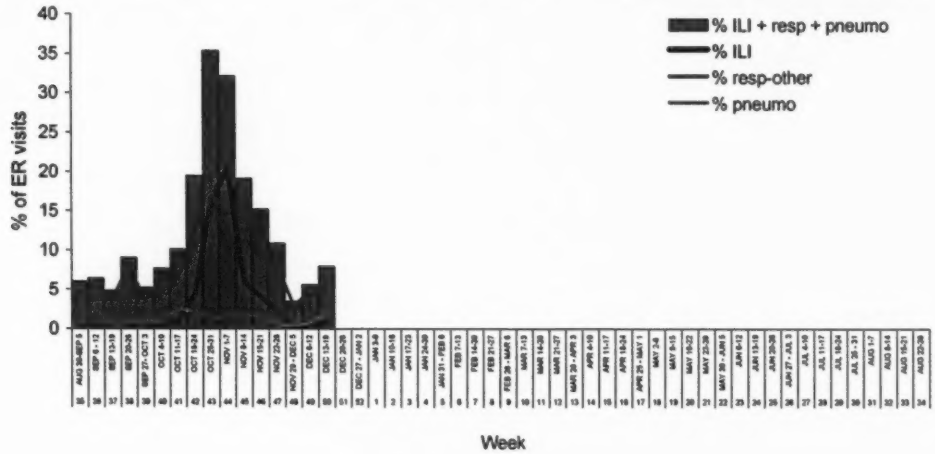
Communities with Laboratory Confirmed pH1N1

Cumulative laboratory information indicates that since April, 2009 Whitehorse and 9 out of 13 surrounding communities have had confirmed pH1N1 case reports.

Whitehorse General Hospital Emergency Visits

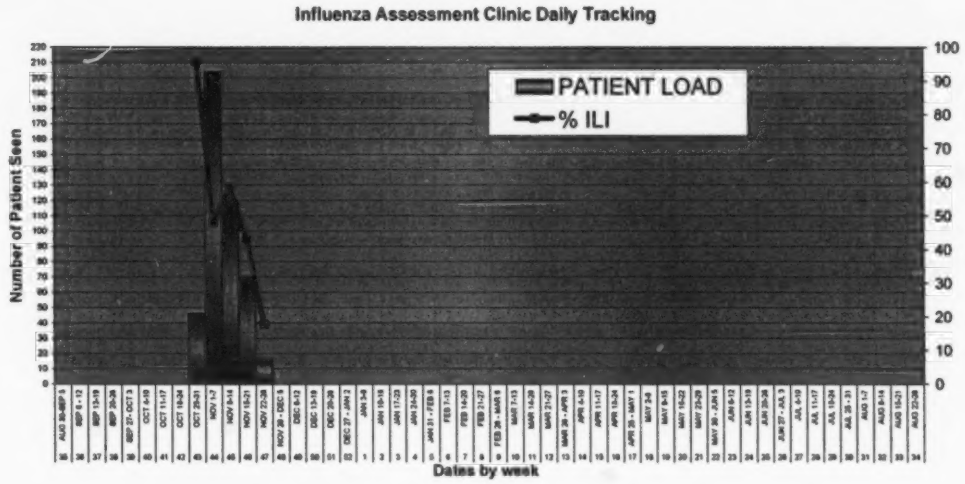
The percentage of presentations to the WGH emergency department for all respiratory related categories (depicted on the graph below) for weeks 48 to 50, are similar to levels seen during weeks 41 and earlier. From week 42 through week 44 (Oct 18-Nov 7), the percentage of presentations with ILI increased from 4% to 20%.The influenza assessment centre was open during weeks 44 to 47 .

Percent of WGH ER visits with influenza-like illness (ILI), other respiratory symptoms, or pneumonia by week



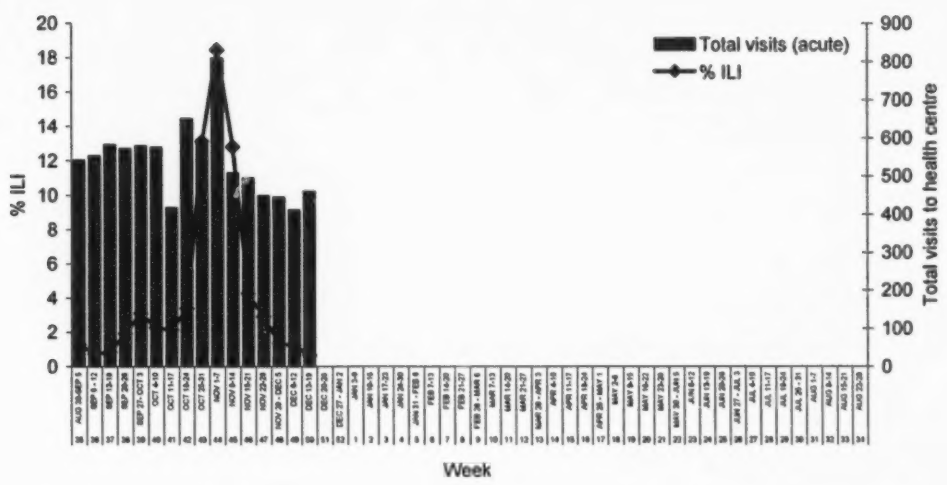
Influenza Assessment Clinic

This downtown Whitehorse clinic opened its doors on October 30th, 2009. The following graph depicts patient volume from October 30th to November 27, 2009. The clinic's last day of operation was November 27th, 2009.



Community Health Centres

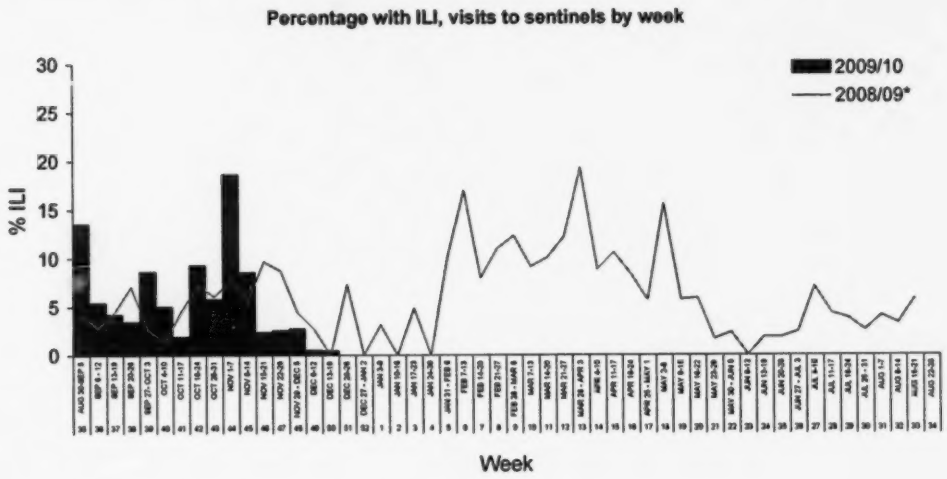
Influenza-related visits to Community Health Centres (rural Yukon) increased substantially during weeks 42-44 while decreasing activity was seen from week 45 on. From week 48 on, the proportion of ILI related visits have returned to similar levels experienced in week 42 and earlier.



*Data provided from Community Nursing

Sentinel physicians/sites

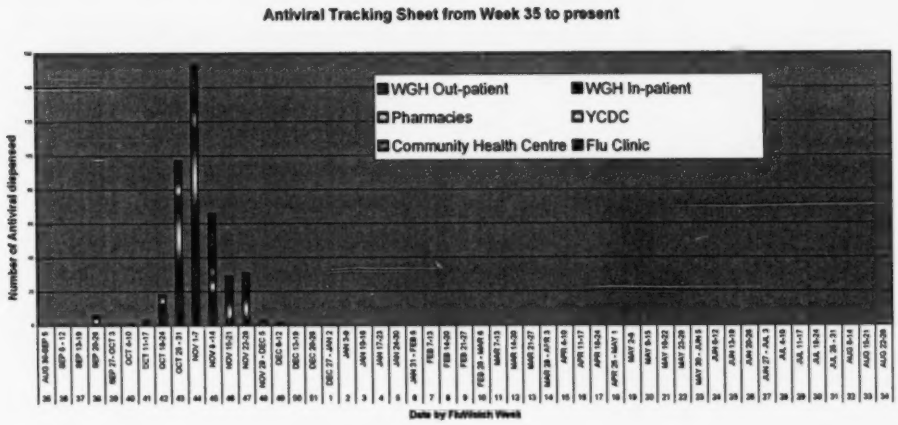
The percentage of patients presenting to sentinel physicians or sites with ILI in week 50 was 0.4%. During the 2008/09 season, an average of five sentinel reports were received each week. A new recruitment of sentinel physicians and sites occurred in July 2009. There are presently 18 sentinel physicians/sites across the territory; 50% of sentinels reported in week 50. Yukon's sentinel surveillance system is comprised of all Community Health Centres and participating physicians. (FluWatch Sentinel Surveillance Information *http://www.phac-aspc.gc.ca/fluwatch/sent-eng.php*)



*2008/09 weeks are slightly different than those shown (following the Sun-Sat weekly pattern).

Antiviral Prescriptions/Dispensing

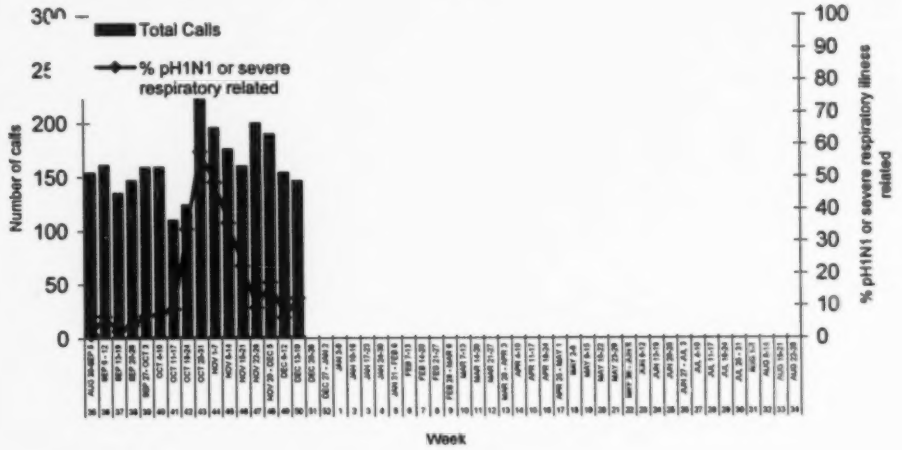
From week 42 to week 44, there was a sharp increase in antiviral dispension in the territory. The highest number of antivirals medications were dispensed in week 44, with 154 individuals given antiviral. Antiviral dispension has declined from week 45 on. *Please note data collection is ongoing.*



HealthLink 811

The percentage of calls related to Influenza A pH1N1 or severe respiratory illness sharply increased in weeks 42 and 43 compared to previous weeks. During week 43, 58% of HealthLink 811 calls were related to pH1N1 or severe respiratory illness, with 45% of callers requesting information on symptom management and/or guidance. Week 43 saw an increase in overall call volume to HealthLink as well. During weeks 44 to 47, a decreasing proportion of HealthLink calls have been related to pH1N1 or severe respiratory illness. Since week 47, percentage of calls related to pH1N1 or severe respiratory illness remain mildly elevated in comparison to weeks 42 and earlier.

Number of calls and percentage related to pH1N1 or severe respiratory illness by month



Calls related to pH1N1 or severe respiratory illness by type of call

Week ending	Oct 17	Oct 24	Oct 31	Nov 07	Nov 14	Nov 21	Nov 28	Dec 05	Dec 12	Dec 19	Dec 26	Jan 02
Week	41	42	43	44	45	46	47	48	49	50	51	52
Triage	70.0	73.8	44.5	58.9	47.6	50.0	17.1	36.4	80.0	61.1		
Education	30.0	26.2	54.8	40.0	42.9	30.8	74.3	33.3	10.0	27.8		
Wayfinding	0.0	0.0	0.6	1.1	9.5	19.2	8.6	30.3	10.0	11.1		

Note: Triage = caller requesting information on symptom management/guidance; Education = caller requesting information about an illness or condition; Wayfinding = caller looking for contact or service directions

Outbreaks

On October 29th, 2009 (during week 43) YCDC was notified of an influenza outbreak within the Whitehorse Correctional facility. The outbreak was contained to fewer than 10 residents who developed symptoms during their stay at the facility or who exhibited symptoms of influenza upon admission. Causative organism of the outbreak was identified as pH1N1. This outbreak was declared over on November 16th, 2009
No additional facility outbreaks have been reported since week 43 (Oct 25 - 31, 2009).

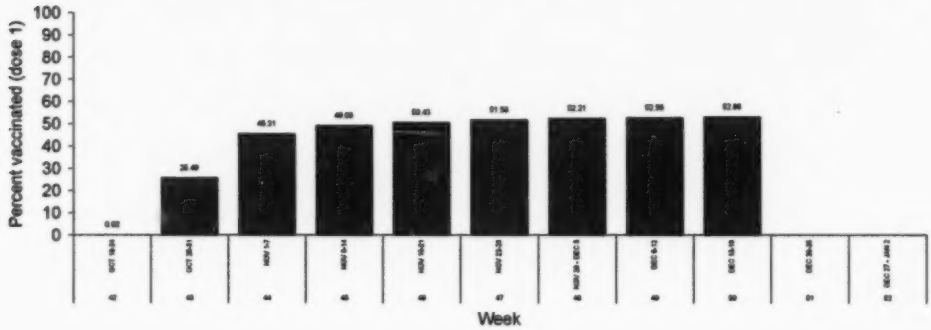
Schools

There have been no reports of high absenteeism in schools since week 45 (Nov 8 - 14, 2009).

Immunization

The percentage of the population vaccinated with one dose against influenza A pH1N1 reached 52.9% in week 50. The age groups with the highest proportions vaccinated (dose 1) are those 6 months to 4 years and those 65 year or older. Vaccine administration is ongoing.

Proportion of population vaccinated, dose 1, by week in the Yukon Territory



Proportion of population vaccinated, dose 1, by age group by December 5, 2009

Age group	% Vaccinated
6 mo - 4 years	68.6
5-18 years	55.2
19-29 years	34.4
30-39 years	50.8
40-64 years	54.7
65+ years	67.8
TOTAL	52.9

***Data provided by the Community Nursing Vaccination Program.**

Adverse Events Following Immunization

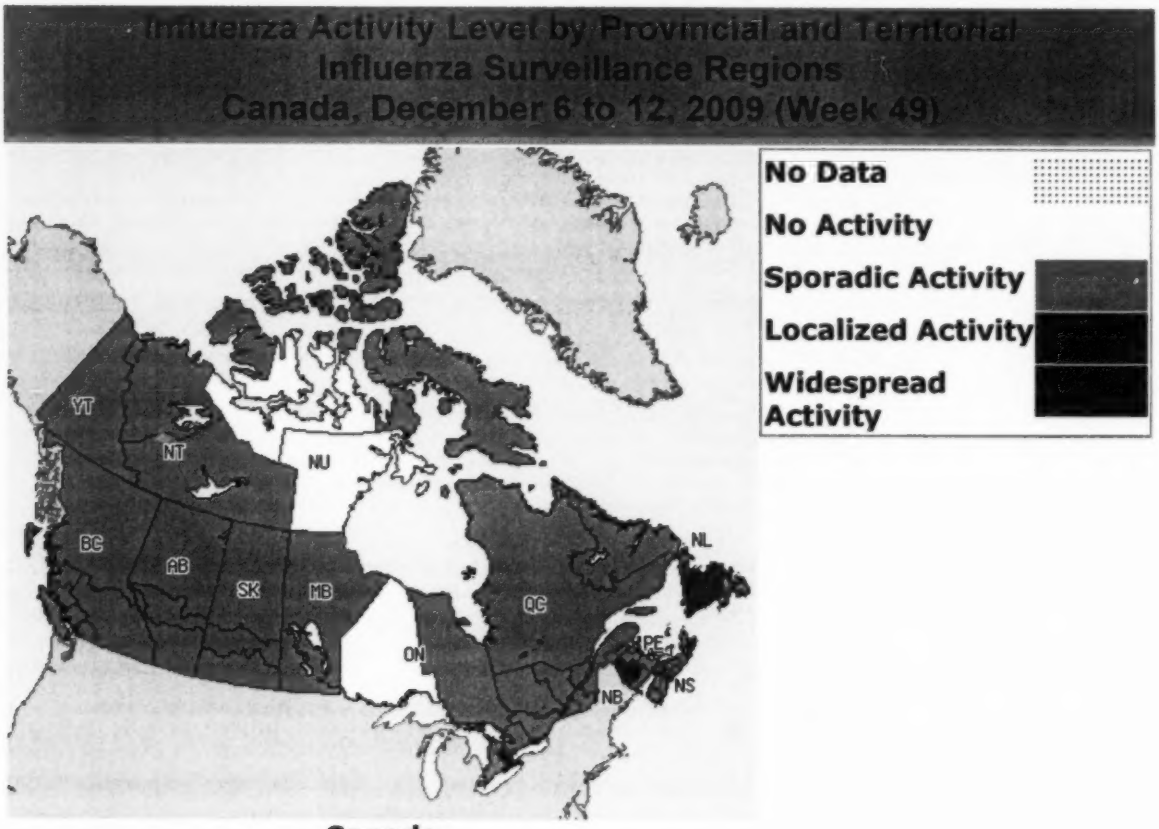
Of 18,057 doses administered from October 26 to December 19, 2009, 31 adverse events following immunization have been reported. Half of these events were reports of local reactions, and half were reports of allergic reactions. None of the events fit the criteria for serious adverse events, and none required hospitalization.

National and International Influenza Summary
Obtained from: FluWatch
2009 -10: Week 49
December 5- 12, 2009

Overall Influenza Summary - Week 49 (December 6 to December 12, 2009)

At the national level, the overall influenza activity continued to decrease this week. All FluWatch influenza indicators declined for at least the fourth consecutive week. The ILI consultation rate was even below the expected ranged for this time of the year.

On week 49, only four regions in ON, NB & NL reported localized activity and none have reported widespread activity. The 28 influenza outbreaks reported this week were all in schools and occured in QC (27) and NB (1). Note that this is the first year that all the provinces and territories are reporting on influenza outbreaks in schools (greater than 10% absenteeism on any day most likely due to ILI) which is increasing considerably the total number of outbreaks reported compared to previous years.



Canada

Canadian situation

Antigenic Characterization

Since September 1, 2009, the National Microbiology Laboratory (NML) has antigenically characterized 518 Pandemic (H1N1) 2009 viruses and eight seasonal influenza viruses (two influenza A/H1N1, five H3N2, and one B virus) that were received from Canadian laboratories. Of the 518 Pandemic (H1N1) 2009 viruses characterized, 515 (99.4%) were antigenically related to A/California/7/2009, which is the pandemic reference virus selected by WHO as the Pandemic (H1N1) 2009 vaccine. Three viruses (0.6%) tested showed reduced titer with antisera produced against A/California/7/09. Sequence analysis of the HA showed that the two viruses with reduced titer did not have the mutation at amino acid position D222G as reported by Norway. Of the five seasonal influenza A (H3N2) viruses characterized, one was related to A/Brisbane/10/07, which is the influenza A/H3N2 component recommended for the 2009-10 influenza vaccine and four viruses were antigenically related to A/Perth/16/09, which is the WHO recommended influenza A (H3N2) component for the 2010 Southern Hemisphere vaccine.

Antiviral Resistance

NML: Pandemic (H1N1) 2009 viruses tested so far have been sensitive to zanamivir (554 samples) but resistant to amantadine (580 samples).

Provinces: Seven cases of oseltamivir resistant Pandemic (H1N1) 2009 were reported to date in Canada: one in Alberta, four in Ontario and two in Quebec

International update

Global information

WHO: Worldwide more than 208 countries and overseas territories or communities have reported laboratory confirmed cases of Pandemic (H1N1) 2009, including at least 9,596 deaths. In the temperate zone of the northern hemisphere, Pandemic (H1N1) 2009 activity has passed its peak in North America and in parts of western, northern, and eastern Europe, but activity continued to increase in parts of central and south-eastern Europe, as well as in south and east Asia. Influenza transmission remained active in much of western and central Asia and there was evidence of Pandemic (H1N1) 2009 circulation in most regions of Africa. As many countries have stopped counting individual cases, particularly of milder illness, WHO believes the case count is likely to be significantly lower than the actual number of cases that have occurred. < http://www.who.int/csr/don/2009_12_11a/en/index.html >

Antiviral resistance: To date, 102 Pandemic (2009) H1N1 isolates worldwide have been found to be resistant to oseltamivir, all with the same H275Y mutation. <http://www.who.int/csr/disease/swineflu/laboratory11_12_2009/en/index.html >

Geographic update

Europe: In Europe, geographically widespread transmission of Pandemic (H1N1) 2009 continued to be observed across the continent. With the exception of France where activity continued to increase, activity has peaked or passed its peak in much of western Europe. In northern Europe, intensity remained high, however activity has begun to decline in Norway, Sweden, and Denmark. Increasing activity continued to be observed in parts of central and south-eastern Europe. Further east, declining rates of illness have been observed. In the Russian Federation, influenza virus circulation remained active, but overall activity may have recently peaked. 99% of subtyped influenza A viruses in Europe were Pandemic (H1N1) 2009. Of note, detections of Respiratory Syncytial Virus in Europe have increased over the past four weeks which may partially account for elevated activity among young children.
<http://www.ecdc.europa.eu/en/activities/surveillance/EISN/Pages/EISN_Bulletin.aspx and http://www.euroflu.org/index.php>

United States: In United States active influenza virus transmission persisted but overall activity continued to decline for the fifth consecutive week. After 8 weeks of increases, proportional mortality due to pneumonia and influenza has begun to decrease but remained elevated above the epidemic threshold; weekly numbers of lab-confirmed hospitalizations and deaths have also recently begun to decline. So far, comparing transmission during the current winter season to transmission during the summer season, there appeared to be 2-3 times more hospitalized cases and deaths in the United States. Over 99% of all subtyped influenza A viruses being reported to CDC were 2009 Pandemic (H1N1) 2009. <http://www.cdc.gov/flu/weekly/ and http://www.cdc.gov/h1n1flu/update.htm>

Asia: In Western and Central Asia, influenza virus transmission remained active. In East Asia, influenza transmission remained variable. Influenza activity continued to increase in Japan and has recently begun to increase in Hong Kong SAR and Chinese Taipei both of which previously experienced a peak of transmission. Elevated but stable ILI activity has been reported in southern China, but declined in activity continued to be observed in northern China and Mongolia. A small number of seasonal influenza viruses continued to be detected in Asia but in decreasing amounts.
<http://www.who.int/csr/disease/swineflu/updates/en/index.html>

Pandemic H1N1 Influenza Web Sites

Yukon H&SS	www.hss.gov.yk.ca/
PHAC:	www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php
BCCDC:	www.bccdc.ca/dis-cond/a-z/_h/HumanSwineFlu/default.htm
	www.health.gov.bc.ca/pandemic/response/index.html
US CDC:	www.cdc.gov/swineflu/index.htm
WHO:	www.who.int/csr/disease/swineflu/en/index.html

Acronyms

ILI:	Influenza-Like Illness
pH1N1:	Pandemic H1N1 influenza or swine origin influenza
WHO:	World Health Organization

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